



**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of )  
Shibin Zhou *et al.* ) Prior Group Art Unit: 1636  
Serial No. Unasigned ) Prior Examiner: T. McKelvey  
Filed: February 7, 2001 )  
For: HUMAN FAST-1 GENE

**SEQUENCE RULES COMPLIANCE**

Assistant Commissioner of Patents & Trademarks  
Washington, D.C. 20231

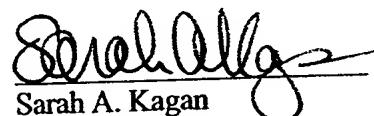
Dear Sir:

A paper copy of a substitute sequence listing submitted in parent application U.S. Serial No. 09/113,, 309 is submitted herewith. Please use the computer readable form submitted in the parent application on 18 November 1999 for examination of the subject application.

The content of the two forms, paper and CRF, are believed to be identical.

Respectfully submitted,

02-06-01  
Date

  
Sarah A. Kagan  
Reg. No. 32,141

BANNER & WITCOFF, LTD.  
1001 G Street, N.W. - Eleventh Floor  
Washington, D.C. 20001-4597  
Telephone: 202/508-9100

**COPY**



## SEQUENCE LISTING

<110> Zhou, Shibin  
Zawel, Leigh  
Vogelstein, Bert  
Kinzler, Kenneth

<120> Human Fast-1 Gene

<130> 01107.10898

<140> 09/113,309  
<141> 1998-07-10

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Ala Pro Ser Arg Arg Leu Lys Leu Ala Gln Ile Ile Arg Gln Val Gln  
50 55 60  
Ala Val Phe Pro Phe Arg Glu Asp Tyr Glu Gly Trp Lys Asp Ser  
65 70 75 80  
Ile Arg His Asn Leu Ser Ser Asn Arg Cys Phe Arg Lys Val Pro Lys  
85 90 95  
Asp Pro Ala Lys Pro Gln Ala Lys Gly Asn Phe Trp Ala Val Asp Val  
100 105 110  
Ser Leu Ile Pro Ala Glu Ala Leu Arg Leu Gln Asn Thr Ala Leu Cys  
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Arg Arg Trp Gln Asn Gly Gly Ala Arg Gly Ala Phe Ala Lys Asp Leu  
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Pro Pro Pro Ser Glu Gly Phe Ser Ile Lys Ser Leu Leu Gly Gly Ser  
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Pro Thr Arg Val Glu Gly Glu Thr Val Gln Gly Gly Ala Ile Gly Pro  
225 230 235 240  
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 50 55 60  
 Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala Ile Thr Thr Gln Asn Cys  
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 Tyr Gln Arg Val Glu Thr Pro Val Leu Pro Pro Val Leu Val Pro Arg  
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Gly Thr Trp Ser Pro Asp Arg Gly Ser Met Tyr Gly Leu Ser Pro Gly  
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Thr His Glu Gly Ser Cys Thr His Thr His Glu Gly Pro Lys Asp Ser  
85 90 95  
Met Ala Gly Asp His Thr Arg Ser Arg Lys Ser Lys Lys Asn Tyr  
100 105 110  
His Arg Tyr Tyr Lys Pro Pro Tyr Ser Tyr Leu Ala Met Ile Ala Leu  
115 120 125  
Val Ile Gln Asn Ser Pro Glu Lys Arg Leu Lys Leu Ser Gln Ile Leu  
130 135 140  
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165 170 175  
Lys Ile Leu Lys Asp Pro Gly Lys Pro Gln Ala Lys Gly Asn Phe Trp  
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Thr Val Asp Val Ser Arg Ile Pro Leu Asp Ala Met Lys Leu Gln Asn  
195 200 205  
Thr Ala Leu Thr Arg Gly Gly Ser Asp Tyr Phe Val Gln Asp Leu Ala  
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Pro Tyr Ile Leu His Asn Tyr Lys Tyr Glu His Asn Ala Gly Ala Tyr  
225 230 235 240  
Gly His Gln Met Pro Pro Ser His Ala Arg Ser Leu Ser Leu Ala Glu  
245 250 255  
Asp Ser Gln Gln Thr Asn Thr Gly Gly Lys Leu Asn Thr Ser Phe Met  
260 265 270  
Ile Asp Ser Leu Leu His Asp Leu Gln Glu Val Asp Leu Pro Asp Ala  
275 280 285  
Ser Arg Asn Leu Glu Asn Gln Arg Ile Ser Pro Ala Val Ala Met Asn  
290 295 300  
Asn Met Trp Ser Ser Ala Pro Leu Leu Tyr Thr His Ser Lys Pro Thr  
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Arg Asn Ala Arg Ser Pro Gly Leu Ser Thr Ile His Ser Thr Tyr Ser  
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Ser Ser Ser Ser Ile Ser Thr Ile Ser Pro Val Gly Phe Gln Lys  
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Glu Gln Glu Lys Ser Gly Arg Gln Arg Val Gly His Pro Ile

355 360 365  
Lys Arg Ser Arg Glu Asp Asp Cys Ser Thr Thr Ser Ser Asp Pro  
370 375 380  
Asp Thr Gly Asn Tyr Ser Pro Ile Glu Pro Pro Lys Lys Met Pro Leu  
385 390 395 400  
Leu Ser Leu Asp Leu Pro Thr Ser Tyr Thr Lys Ser Val Ala Pro Asn  
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Val Val Ala Pro Pro Ser Val Leu Pro Phe Phe His Phe Pro Arg Phe  
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Thr Tyr Tyr Asn Tyr Gly Pro Ser Pro Tyr Met Thr Pro Pro Tyr Trp  
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450 455 460  
Gln Ser Pro Leu Asp Leu Asp Asn Met Leu Arg Ala Met Pro Pro Asn  
465 470 475 480  
Lys Ser Val Phe Asp Val Leu Thr Ser His Pro Gly Asp Leu Val His  
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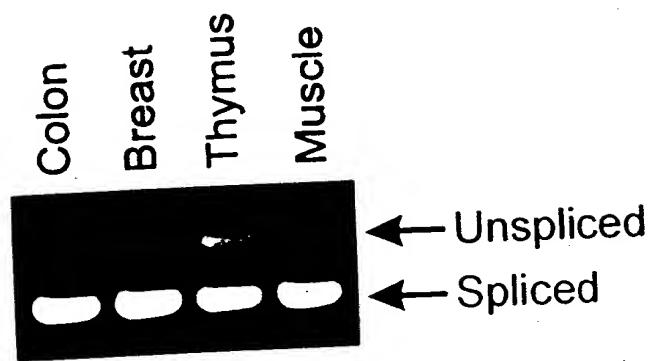


FIG. 1

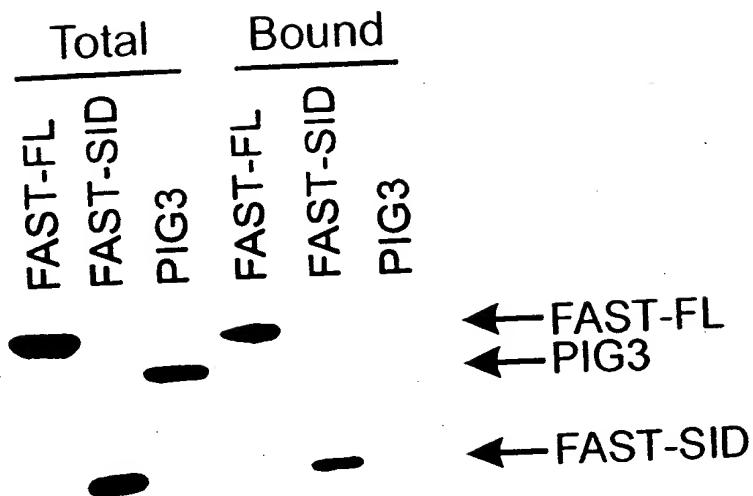
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xFAST-1	rsrksKKKMYHRYVYKPPYISMLAMIALVITQNSPEKRLKLISQILKEVSTLFPE	153
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hFAST-1	-----ggsggegapwpglapqsspvpagtgnsggeeavptpplpsserplwpplcp	222
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hFAST-1	ppptrvegetvqggaiqstlspetrawp111qgtavpggrssggħras1	273
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hFAST-1	wgq-----	276
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xFAST-1	dlPTSM1TKSVAPNWWApst1pffhfprftyynygpfspymtpwywgfpht	454
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**FIG. 2A**

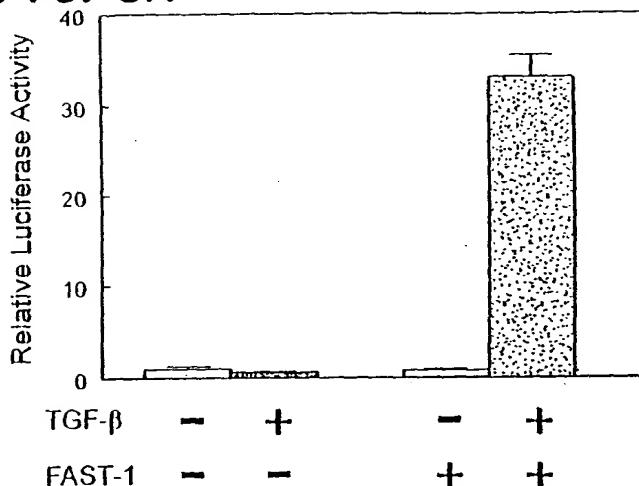


**FIG. 2B**

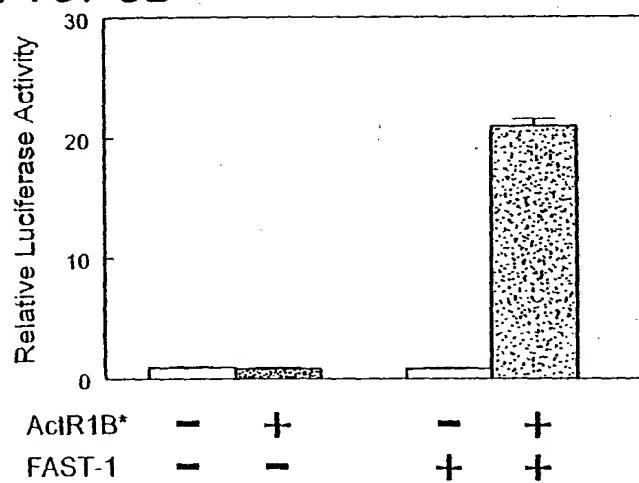




**FIG. 3A**



**FIG. 3B**



**FIG. 3C**

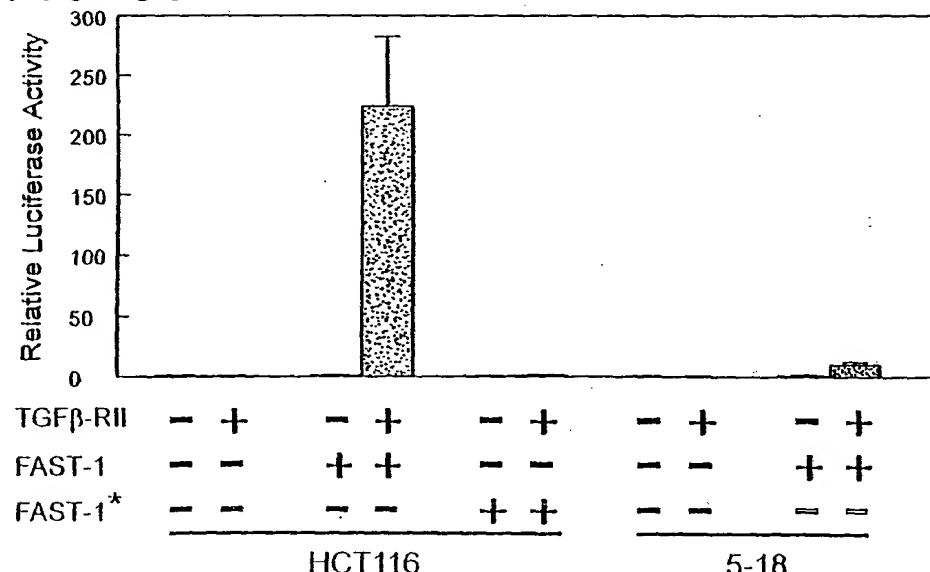




FIG. 4A



FIG. 4B

	CONSENSUS											
	1	2	3	4	5	6	7	8	9	10	11	12
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A	23	35	17	0	0	0	5	0	100	0	11	17
T	23	23	84	100	0	100	35	52	0	100	5	12
C	11	0	5	0	0	0	0	0	0	0	11	5

FIG. 4C

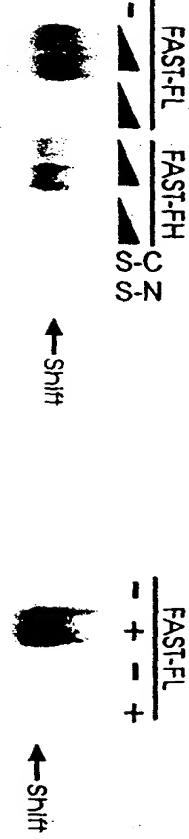


FIG. 4D

